Lawrence Livermore National Laboratory
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POLLUTION PREVENTION OPPORTUNITY ANALYSIS

A systematic evaluation for processes and operations

Pollution prevention: targeting the source

Pollution prevention is the use of materials, processes, or practices that eliminate or reduce the quantity and toxicity of waste at the generating source.

These practices help lessen the discharge of hazardous chemicals and protect natural resources through conservation and improved efficiency. Pollution prevention also helps reduce the use of hazardous materials, energy, and water.

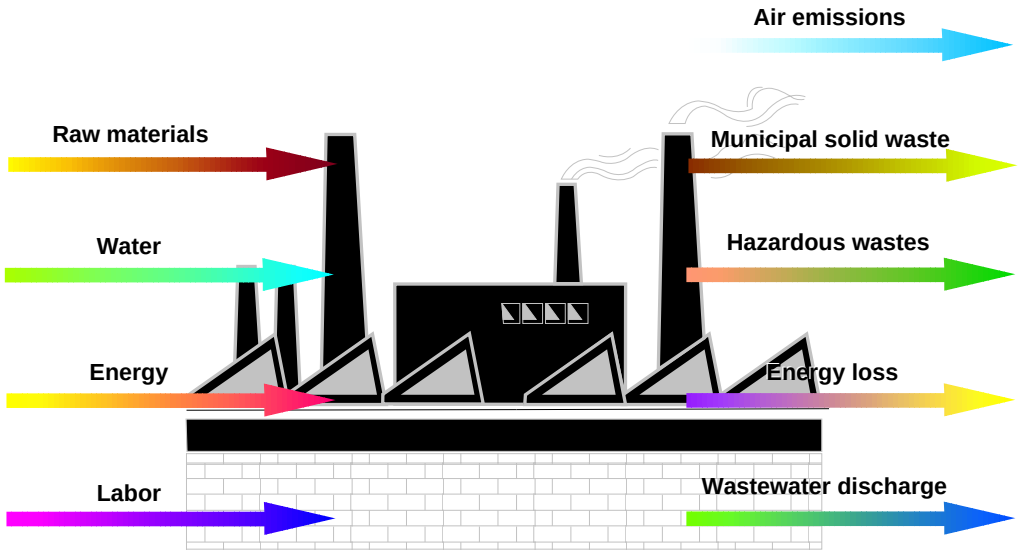
Source reduction is the first step in a hierarchy of options for minimizing waste and pollution generation. It is followed by recycling, reuse, treatment, and disposal.

Benchmarking processes for pollution prevention analysis

To determine which pollution prevention strategies are most appropriate for a facility such as Lawrence Livermore National Laboratory, a benchmark must first be established.

Engineers and technicians analyze processes that generate waste and emissions to identify waste volume, toxicity, chemical composition, and recycling potential. This benchmarking indicates whether or not pollution prevention strategies can be implemented immediately or if further in-depth analysis is required.

Pollution Prevention Benchmarking



Benchmarking a process's inputs and outputs indicates whether or not pollution prevention strategies can be easily implemented.

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Pollution Prevention Opportunity Assessments

The pollution prevention opportunity assessment is a systematic analysis that identifies specificoperational characteristics that create environmental impacts, such as waste, toxic chemical releases, power and water consumption, and ecosystem damage.

Specifically, the pollution prevention opportunity assessment is an environmental analysis tool used to evaluate processes and operations. The goal of the assessments is to:

- Characterize all aspects of the process or operation, including process flow, waste generation patterns, material and energy consumption, costs, manpower, and reliance on toxic chemicals.
- Define impacts that the process and related wastes have on the air, water, and land.
- Associate impacts and wastes with specific unit operations.
- Assign related costs and liabilities to specific waste streams.
- Identify technical and procedural options that will minimize waste and pollution on a cost-effective basis.

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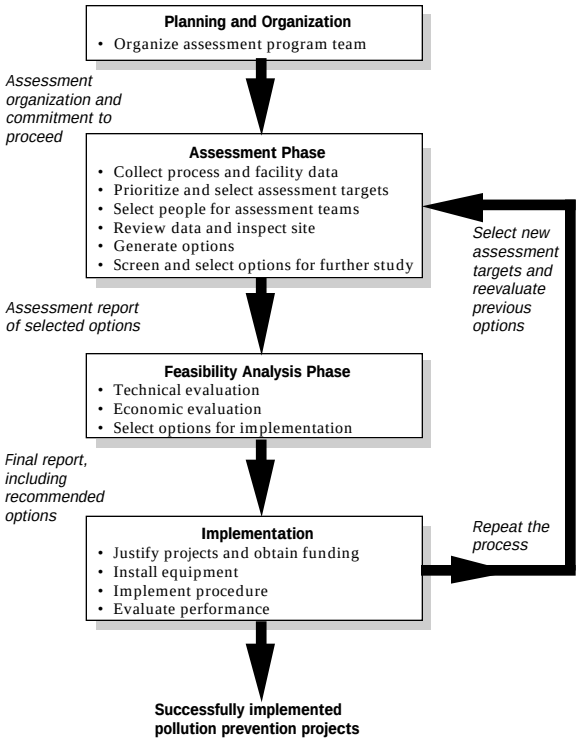

Pollution prevention opportunity assessments

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Please write or call us for additional information:

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